4. (Amended) The process as claimed in Claim 1, wherein unirradiated $(U,Pu)O_2$ mixed-oxide nuclear fuel pellets, possibly produced by different manufacturing processes and scrapped, undergo the same pretreatment process as the aforementioned scrap pellets for the purpose of recycling them.

5. (Amended) The process as claimed in Claim 1, wherein up to 40% of scrap, with respect to the net production, is incorporated into the aforementioned process for manufacturing fuel pellets.

6. (Amended) The process as claimed in Claim 1, wherein up to 100% of scrap is incorporated into said first blend (1).

7. (Amended) The process as claimed in Claim 1, wherein a proportion of 99.5%, expressed as mass of PuO_2, of the scraps from the aforementioned process for manufacturing fuel pellets is dry-recycled.

8. (Amended) The process as claimed in Claim 1, wherein a ball milling process is used for the micronization (2, 23) of the first blend and/or of the scrap pellets.

9. (Amended) The process as claimed in Claim 1, wherein a lubricant is added before pelletizing (6 and 20), preferably zinc stearate.

10. (Amended) The process as claimed in Claim 1, wherein the fuel pellets containing scraps and/or the scrap pellets are sintered (7, 21) in an argon and hydrogen atmosphere, preferably at a temperature of between 1670 and 1760°C.

11. (Amended) The process as claimed in Claim 1, wherein, during sintering (7, 21), the partial pressure of oxygen p_{O2} is adjusted, preferably by humidification, in order to improve the interdiffusion of the PuO_2 and UO_2 oxides.

12. (Amended) The process as claimed in Claim 1, wherein scraps and/or UO_2 and PuO_2 oxide powders are recovered during the process or transfer operations by means of cleanable filters, so as to recycle them into scrap pellets at the pelletizing (20) and sintering (21) step.